



**US Army Corps  
of Engineers®**

Engineer Research and  
Development Center

# Dust Control

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**Description** Investigations of dust control by the ERDC Geotechnical and Structures Laboratory focus on developing product recommendations and application guidance for mitigating dust on helipads and lines-of-communication in both combat and sustainment roles. The program began in FY04 in support of Operations Enduring Freedom and Iraqi Freedom for the U.S. Marine Corps Systems Command (MCSC).

**Capabilities** Efforts to identify optimal solutions for dust mitigation have involved a thorough evaluation of commercial-off-the-shelf dust palliatives as well as application equipment. Field demonstrations have validated procedures for effectively reducing dust on helipads and unpaved roads. In early FY07, a dust control field handbook will be published as an ERDC Special Report. The handbook will offer complete guidance including considerations such as climate, soil type, mission objectives, and resource availability.

**Benefits** Effective dust control measures can reduce the threat of dust-related casualties during military operations and improve mobility in theater. Prevention of brown-out conditions during helicopter landings can decrease vehicle maintenance and reduce the threat of crew fatalities. Enhanced visibility along lines-of-communication and in base camps can improve support maneuvers and operational efficiency.

**Success Stories** ERDC team members conducted an initial field demonstration of helipad dust abatement in Yuma, AZ. Based on their recommendations, the required materials were procured by MCSC and available for use in Iraq and Afghanistan 45 days after the demonstration. Hydroseeding application devices modified to meet Marine Corps specifications were used to treat helipads and large areas adjacent to taxiways on U.S.-controlled airfields. Dust palliatives recommended by ERDC researchers provided relief from the persistent dust problems associated with helicopter and aircraft movement.

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Dust mitigation on a U.S. Border Patrol road in Douglas, AZ, using a trailer-mounted hydroseeder being pulled by a HMMWV



ERDC researchers use a hydroseeder to create a dust-free helicopter landing pad in Yuma, AZ